

### **REMARKS/ARGUMENTS**

Claims 1-7 and 9-10 are pending in this application. This Amendment amends claims 1, 5, 6, 9 and 10, and cancels claims 2 and 3. The subject matter of canceled claims 2 and 3 has been incorporated into claim 1. Claim 6 has been amended to attend to the informality identified by the Examiner. Claims 5, 9 and 10 have been amended to correct minor informalities. Support for all amendments can be found in the specification and drawings as originally filed. The specification has been amended to correct minor grammatical or translational errors. No new matter has been added.

Claims 1, 3, 5, 6, 7 and 9 stand rejected under 35 U.S.C. §103(a) as being obvious over Applicants' admitted prior art (hereinafter referred to as "AAPA") in view of U.S. Patent No. 6,009,913 to Kojima et al. (hereinafter "Kojima"). Claim 3 has been canceled and the limitations thereof added to independent claim 1.

Claim 1 has been amended to further define the invention over the cited prior art. Amended claim 1 defines a fuel tank made from an Al-coated steel sheet. The steel sheet has an alkali-soluble resin film directly formed on a surface of the sheet. The resin film is soluble in an alkali liquid of pH 9.0 or higher and has a carboxyl group in its molecule with an acid value of 40-90.

AAPA (JP 6-306637, JP 9-053166), as cited on page 2, line 19 to page 3, line 3 of the specification, discloses an Al-coated steel sheet to which an organic resin film dispersing metal powder is applied. An oxide film is formed on the surface of the Al plating layer to protect the Al-coated steel sheet from an organic acid.

Kojima discloses a lubricant surface-treated steel pipe for hydroforming use. The lubricant is a resin coating that is soluble in an alkali aqueous solution, which may or may not be removed from the hydroformed product. The resin coating is usually provided on the outer surface of the steel pipe to provide lubrication between dies during hydroforming.

Applicants respectfully disagree with the Examiner's assertion that it would have been obvious to one of ordinary skill in the art to have applied the alkali soluble organic resin film of Kojima directly to the Al-coated steel sheet formed fuel tank in AAPA. AAPA does not teach or suggest an Al-coated steel sheet as in independent claim 1. In particular, some of the disadvantages of the Al-coated steel sheet of APPA, as stated on page 3, lines 9-

17 of the present application, include that the organic resin film and lubricate film of the Al-coated sheets in AAPA are thermally decomposed during resistance welding, which deteriorates the working environment by producing smoke as well as offensive fumes. Additionally, AAPA does not teach or suggest an alkali-soluble resin film having an alkali liquid pH of 9.0 or higher and a carboxyl group in its molecule with an acid value of 40-90 as in amended independent claim 1.

Furthermore, Kojima does not cure the deficiencies of AAPA and there would be no motivation to combine the teachings of an Al-coated fuel tank with an alkali soluble resin used in the process of hydroforming. While Kojima teaches the application of an alkali-soluble resin to a surface of a steel pipe, it does so during the process of hydroforming. The presently claimed invention utilizes an alkali-soluble resin applied to an Al-coated steel sheet during the process of press working. Additionally, Kojima does not teach or suggest an Al-coated steel sheet having an alkali-soluble resin film directly formed on the surface of Al-coated steel sheet. Accordingly, Kojima fails to teach or suggest the use of an Al-coated steel sheet for a fuel tank, which has a resin film on its surface for the prevention of scratches during press working. For the foregoing reasons, Applicants respectfully request reconsideration of the rejection of amended independent claim 1.

With respect to dependent claim 6, the Examiner states that page 3, lines 27 of the specification discussing AAPA discloses the dispersion of a powdery synthetic resin such as polyolefin or fluoresin. However, as stated on page 4, lines 2-4 of the present application, AAPA does not teach or suggest mixing the resin film with 1-25 mass % powdery synthetic resin to resolve the problems of adhesiveness and durability of an anti-corrosion paint film applied to the external surface of the fuel tank as in the present invention.

Claims 5, 6, 7, and 9 depend from and add further limitations to amended independent claim 1 and are deemed to be patentable for the reasons discussed hereinabove in connection amended independent claim 1. Reconsideration of the rejection of claims 5, 6, 7, and 9 is respectfully requested.

Claims 2 and 4 stand rejected under 35 U.S.C. §103(a) for obviousness over AAPA in view of Kojima in view of U.S. Patent No. 5,234,974 to Calhoun et al. (hereinafter "Calhoun"). Claim 2 has been canceled and the limitations thereof added to independent claim 1.

Calhoun discloses an Al-soluble hydrophilic polymer coating formulation. The coating prevents water beading and water spotting on a substrate surface. The polymeric coating provides either a transparent or a reflective substrate that is normally subject to fogging with a fog-resistant coating which dissolves and is removable in mild alkali.

Calhoun clearly does not cure the deficiencies of AAPA or Kojima because it does not teach or suggest a fuel tank made from an Al-coated steel sheet having an alkali-soluble resin having a pH of 9.0 or higher and a carboxyl group in its molecule with an acid value of 40-90 directly formed on the Al-coated steel sheet. Independent claim 1, as discussed hereinabove, has been amended to further distinguish over the prior art references. Furthermore, Calhoun is non-analogous art, as it is directed to hydrophilic polymer coatings. The use of this reference is improper, as one of ordinary skill in the art would not have reasonably consulted this reference and applied its teaching to the present invention for forming a resin film on the surface of an Al-coated steel sheet. Nor would one of ordinary skill in the art have reasonably consulted this reference and applied its teaching to the present invention for the prevention of scratches or damage during the process of press-working.

Additionally, Calhoun teaches away from the use of a resin coating on Al-coated steel sheet on fuel tanks to prevent damage to the surface during press-working. Col. 9, line 66-Col. 10, line 6 of Calhoun clearly teaches that the polymeric coating is applied to mirrors, highly polished metal surfaces and other reflective substrates, including windowpanes, automobile windows, and the like, anti-fogging surfaces. The Al-coated steel sheet in the claimed present invention is not an anti-fogging surface. Calhoun clearly does not teach a fuel tank having an alkali-soluble resin film directly applied to an Al-coated steel sheet to prevent damage to a surface during press-working.

Additionally, the applied combination cited by the Examiner is improper since there is no basis for the combination other than the hindsight provided by the Applicants' disclosure which may not be used as a blueprint or a template. The Examiner has selected elements from different prior art references to create a hypothetical combination for the purpose of rejecting claim 4. Reconsideration of the rejection of claim 4 is respectfully requested.

Claim 10 stands rejected under 35 U.S.C. §103(a) for obviousness over AAPA and Kojima as applied to claim 1 above and further in view of Japanese Patent No. 410265967 to Teruaki et al. (hereinafter "Teruaki").

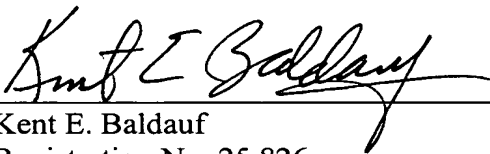
Teruaki discloses the formation of a chromic-containing resin film on a surface of an Al-plating layer. The film is filmed on one side or both sides of a hot dip Al-coated steel sheet. If the resin chromate film is formed on one side, an inorganic chromate film treatment may be applied to the other side. The resin film inhibits damages of the plating layer during press-forming and improves corrosion resistance against degraded gasoline.

Teruaki does not cure the deficiencies of AAPA or Kojima with respect to amended independent claim 1. Furthermore, Teruaki does not teach an alkali-soluble resin film as in dependent claim 10. Since Teruaki clearly does not teach or suggest an alkali-soluble resin film, corrosion cannot be prevented on an internal surface of a fuel tank even after removal of the resin film. Reconsideration of the rejection of claim 10 is respectfully requested.

In view of the foregoing amendments and remarks, claims 1, 4-7 and 9-10 are deemed to be in condition for allowance. Reconsideration of the Examiner's rejections and allowance of claims 1, 4-7 and 9-10 are respectfully requested.

Respectfully submitted,

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